

Abstract

The method and apparatus described and illustrated herein generally relate to a bypass method to provide blood flow directly from a heart chamber, such as the left ventricle, and coronary vasculature, such as a coronary artery, and a conduit especially suited for placement in the myocardium to provide such flow. The conduit is particularly useful when a blockage partially or completely obstructs the coronary artery, in which case the conduit is positioned distal to the blockage. Aspects of the present invention relate to conduits in the form of stents that have particular configurations exhibiting properties suited to placement in the myocardium. Such a stent expands from a first diameter during delivery to a myocardial site to a second diameter when implanted in the site. The stent includes a configuration that has high radial strength to resist deformation from contractile forces experienced during a cardiac cycle. The configuration also exhibits high flexibility in a compressed state and a deployed state to permit passage to a myocardial site and remain patent when implanted in the site. The expandable stent may include suitable coverings and coatings.

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